

### AMENDMENTS TO THE CLAIMS

1. (currently amended) A method of identifying a compound that ~~modulates~~ is an allosteric modulator of intermolecular interactions from a distal site at a functionally critical site between a target protein and a modifier, ~~comprising~~ which method comprises the steps of

a) identifying a cavity on a target protein that is a measurable distance to ~~from the functionally critical site of said target protein, -that is involved in intermolecular interactions with said modifier~~ said cavity being a candidate site for interacting with an allosteric modulator;

b) calculating the dimensions of said cavity and mapping the chemical and/or electrostatic properties of said cavity;

c) identifying compounds that contain functional groups that can be accommodated by said cavity;

d) testing said compounds in an in vitro assay to detect a compound which binds within the cavity of said target protein and allosterically modulates intermolecular interactions at the functionally critical site between said target protein and said modifier;

thereby identifying a compound that is an allosteric modulator of interactions at the functionally critical site between said target protein and a modifier.

2. (withdrawn from consideration) A pharmaceutical composition comprising:

a) a pharmaceutically acceptable carrier of diluent; and

b) a therapeutically effective amount of a compound having a structure selected from the group consisting of Formulae I-XIX.

3. (withdrawn from consideration) A method of treating an individual suffering from an inflammatory condition comprising the step of administering to said individual a therapeutically effective amount of a compound having a structure selected from the group consisting of Formulae I-III.

4. (withdrawn from consideration) A method of treating an individual suffering from an undesirable immune response or immunological condition comprising the step of administering to said individual a therapeutically effective amount of a compound having a structure selected from the group consisting of Formulae I-VI.

5. (withdrawn from consideration) A method of treating an individual suffering from a bacterial infection comprising the step of administering to said individual

- a) penicillin or a penicillin derivative antibiotic; and
- b) a compound having a formula selected from the group consisting of Formulae VII-XIX.

6. (previously presented) The method of claim 1, wherein step (c) comprises detecting shape complementarity between the functional group of the compound and the cavity.

7. (previously presented) The method of claim 1, wherein step (d) comprises detecting a compound that inhibits intermolecular interactions between said target protein and said modifier.

8. (previously presented) The method of claim 1, wherein step (d) comprises detecting a compound that enhances intermolecular interactions between said target protein and said modifier.

9. (withdrawn from consideration) The method of claim 1, wherein the target protein is selected from the group consisting of a membrane-bound protein, a cytosolic protein, a nuclear





25. (new) The method of claim 1, wherein identifying the allosteric candidate cavity within the structure of a target protein in step b) comprises identifying thermal  $\beta$ -factors, using calorimetric values from thermodynamic studies, or using computer simulation algorithms.